

Experience of Stratified Case Selection and LLM Report Feedback in CT Colonography Training

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Background

- Radiology trainees often have limited exposure to pathology rich subspecialty studies.
- Case availability is variable and dependent on service pressures.
- Structured feedback is essential for registrar learning but is often limited by consultant time.
- We explored a case-based workflow supported by automated report comparison and feedback.



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Aim

- To explore the educational impact of trainee reporting of stratified CT colonography cases and subsequent automated structured feedback.
- To assess the strengths and limitations of this reporting workflow and automated feedback.



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Methods: Case Selection

- Previously reported CT colonography studies were reviewed and stratified to include five cases from each C-code (C1–C5), for a total of 25 examinations.
- All cases had consultant validated reference reports.
- Cases were distributed to a single radiology trainee for independent reporting.



Trainee reports submitted independently

- Trainee reports submitted independently



- A scripted workflow compared trainee reports with consultant reference reports



- Structured feedback generated using GPT-5



Results

- Reports were structurally sound in all cases
- Correct C-categorisation achieved in 15/25 cases
- Common discrepancies included:
 1. Under-calling of polyp categories
 2. Incomplete documentation of technique
 3. Variable extracolonic reporting
- Some discrepancies reflected true misses; others reflected reporting style variation



Educational Impact & Limitations

Educational benefits:

- Exposure to pathology rich cases across all C codes.
- Improved confidence in recognising pathology, particularly small polyps.
- Identification of recurrent reporting blind spots.

Limitations:

- Absence of real time reporting pressure
- Does not replicate on-call or service reporting conditions



Conclusion & Future Direction

Conclusion:

Stratified, pre-selected case reporting with automated feedback is:

1. Scalable
2. Time-efficient
3. Educationally valuable
4. Complements, but does not replace, live reporting
5. Reduces the need for additional consultant time

Future refinements may include:

1. Timed reporting sessions
2. Standardised reporting templates incorporating:
 - Lesion characterisation
 - C-RADS and E-classification
 - Key extracolonic findings and pertinent negatives



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Thank you!



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